

## LIV.

ON SOME DRAGONFLIES IN THE DUBLIN MUSEUM OF SCIENCE AND ART. BY GEORGE H. CARPENTER, B.Sc., Lond., Assistant Naturalist in the Science and Art Museum, Dublin. (PLATE XVI.)

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HAVING recently, with the kind assistance of Mr. W. F. Kirby of the British Museum, named the dragonflies in the Dublin Museum collection, I find that we possess examples of at least two species which appear to be undescribed. It seems desirable, therefore, to publish descriptions and figures of these; they are both referable to the sub-family Libellulinæ. At the same time I take the opportunity of figuring and describing fully both sexes of an interesting species of Agrionid from Jamaica, which was founded forty years ago by the Baron de Selys-Longchamps on a single imperfect male specimen.

My best thanks are due to my friend, Mr. R. J. Mitchell, who has kindly photographed the wings of the two new species.

Family.—LIBELLULIDÆ.

LIBELLULINÆ.

Genus.—MISAGRIA, Kirby.<sup>1</sup>

*Misagria funerea*, sp. nov.

(Pl. XVI., figs. 5-9.)

Male.—Length, 37 mm. Expanse, 66 mm. Pterostigma, 3.5 mm.

Head.—Face and mouth-parts yellow; clypeus and frontal tubercle, which is distinctly concave (fig. 5), bright metallic green;

<sup>1</sup> Trans. Zool. Soc. Lond. xii., 1889 (pp. 259, 296).

occiput, blackish. Thorax, dull black, somewhat reddish beneath; abdomen, entirely shining black. Anal upper appendages (fig. 7), slender and curved at base, enlarged and truncated at apex, a little longer than lower appendage; aperture of second segment bounded in front by a conical "hood," at sides behind by a pair of prominent lobes; appendages rather large, terminating in small hooks pointed backwards (figs. 8, 9). Wings (fig. 6), hyaline, very slightly tinged with brown at base; pterostigma, blackish; forewings, with fourteen antecubital and ten postcubital nervures; triangle followed by one row of three cells, then two; hindwings, with eleven-twelve antecubital and ten-eleven postcubital nervures; lower basal cell with two nervures; legs, black, with coxæ and insides of front femora yellowish.

Nicaragua.—(Coll. Miss Hamilton).

This species differs from *M. parana*, Kirby, the type of the genus in having the frontal tubercle bifid instead of convex, and the appendages of second segment much less conspicuous; but, I think, the agreement in wing-neuration is sufficient to warrant its inclusion in the same genus. It may be readily separated from *M. parana* by its black colour and the smaller number of antecubital and postcubital nervures in both wings.

Genus.—**ZYXOMMA**, Rambur.<sup>1</sup>

*Zyxomma multinervis*, sp. nov.

(Pl. XVI., figs. 1-4.)

Male.—Length, 52 mm. Expanse, 85 mm. Pterostigma, 3 mm.

Head.—Face and sides of clypeus, yellow; labrum, black; mouth-parts brown; centre of clypeus and frontal tubercle, black. Thorax and three basal segments of abdomen pruinose; remainder of abdomen, shining black. Hinder lobe of the second segment rounded; prominent aperture, bounded in front by large spherical "hood"; appendages small, yellow, with recurved hooks (figs. 3, 4). Paired anal appendages as long as the two terminal segments; nearly straight, evenly dilated at apex; lower appendage

<sup>1</sup> "Insectes Neuroptères," Paris, 1842 (p. 30). Kirby, Cat. Neur. Odonata, Lond. 1890 (p. 35).

three-quarters as long, very broad at base; upper edge, straight; lower edge, evenly rounded to a blunt point (fig. 2). Legs, deep brown to blackish; coxæ and inside of femora, pruinose. Wings (fig. 1), hyaline, slightly touched with brown at base, infuscated from inner edge of pterostigma to tip; pterostigma, black; forewings, with 14-15 antecubital, and 11 postcubital nervures, first four of the latter not continuous; hindwings, with 10-11 antecubital, and 12-13 postcubital nervures.

Laloki river, British New Guinea (coll. Col. St. G. Smith).

This is, I believe, the first *Zyxomma* recorded from any part of the Australian region. *Z. petiolatum*, Rambur, the type-species from India, has but 12 antecubital nervures in the forewing. *Z. obtusum*, Alb.<sup>1</sup> from Sumatra, has 13 antecubitals, and only 7-9 postcubitals. Its anal appendages also differ in form from those of the present species.

#### Family.—AGRIONIDÆ.

##### COENAGRIONINÆ.

Genus.—**TELEBASIS**, Selys<sup>2</sup> (Kirby<sup>3</sup>) (= *Erythagrion*, Selys<sup>4</sup>).

*Telebasis macrogaster* (Selys).

(Pl. XVI., figs. 10-15.)

This dragonfly was described by the Baron de Selys Longchamps in 1857<sup>5</sup>, under the name of *Agrion macrogaster*, from a male which had lost its head, feet, and hinder abdominal segments. Later, the Baron, in his Synopsis of the Agrioninæ<sup>6</sup>, referred it, with doubt, to his genus *Leptobasis*. There are, in the British Museum collection, several specimens from Jamaica referred, doubtless correctly, to this species, and with these agree a male and two females in the Dublin collection. Fortunately some of the feet are preserved, and as they show small but distinct

<sup>1</sup> Veth's Midden-Sumatra, 1881 (Neuropt., p. 1).

<sup>2</sup> Bull. Acad. Belg. (2) xx., 1865 (p. 378).

<sup>3</sup> Cat. Neur. Odonata (p. 155).

<sup>4</sup> Bull. Acad. Belg. (2) xlii., 1876 (p. 955).

<sup>5</sup> Selys in Sagra's "Hist. Cuba" (Insectes, p. 465).

<sup>6</sup> Bull. Acad. Belg. (2) xliii. (p. 102).

accessory claws (fig. 10), the species cannot be retained in the genus *Leptobasis*. It must be transferred to that which the Baron de Selys Longchamps called first *Telebasis*, later *Erythagrion*, though it differs from the other species in the male, having the abdomen of a dark metallic bronze above, like the female, instead of a bright red.

Male.—Length, 45 mm. Expanse, 43 mm.

Head, dark bronze above and in front; with orange transverse edge to occipital region; pale behind and beneath. Thorax, orange; pronotum, with central longitudinal dark stripe, spreading transversely on hinder lobe; mesothorax, with central and lateral dark bronze stripes; thorax, pale beneath. Abdomen, long and slender, dark bronze above, pale beneath; hinder segments, entirely dark, nearly black; appendages of the second segment (figs. 13, 14), very prominent and complicated; central organ membranous, and recurved at its extremity; a pair of palp-like structures directed backwards from the middle of second segment, and a pair of prominent, rather truncated, processes from hinder margin, projecting beyond third segment; upper anal appendages much shorter than lower, stout and conical as viewed from above, truncated and depressed as viewed from side, brown in colour; lower appendages, black, prominent, and forcipated (figs. 11, 12).

Female.—Length, 40 mm. Expanse, 42 mm.

In colour and markings closely resembling the male, but the terminal and abdominal segments are paler beneath; these segments are greatly swollen, and bear two pairs of small appendages (fig. 15).

In the wings of both sexes, the quadrilateral has (as noted for the male by the Baron de Selys) the upper side two-fifths as long as the lower in the front pair, three-fifths in the hind pair, and the postcostal nervure is much farther from the first than from the second antecubital. The number of postcubitals in our specimens is twelve in the front, which it varies from nine to eleven in the hindwings.

## EXPLANATION OF PLATE XVI.

## FIG.

1. *Zygomma multinervis*, . male; wings.
2. ,, ,, . ,, terminal segments of abdomen, magnified.
3. ,, ,, . ,, base of abdomen, magnified.
4. ,, ,, . ,, ventral edge of second segment and appendages, more highly magnified.
5. *Misagria funerea*, . male; head, magnified.
6. ,, ,, . ,, wings.
7. ,, ,, . ,, terminal segments of abdomen, magnified.
8. ,, ,, . ,, base of abdomen, magnified.
9. ,, ,, . ,, ventral edge of second segment and appendages, more highly magnified.
10. *Telebasis macrogaster*, . claws of foot, magnified.
11. ,, ,, . male; terminal segments of abdomen from above, magnified.
12. ,, ,, . ,, terminal segments of abdomen from side, magnified.
13. ,, ,, . ,, base of abdomen, magnified.
14. ,, ,, . ,, base of abdomen, more highly magnified.
15. ,, ,, . female; terminal segments of abdomen from side, magnified.